A unique method of anesthesia in upper abdominal surgery was described and demonstrated by C. Langton Hewer of London. The trachea is catheterized by direct vision with a laryngoscope under ether, and anesthesia maintained with nitrous oxide, oxygen and ether. By increasing the proportion and pressure of oxygen, the respiratory movements can be brought down to practically zero as the blood is sufficiently oxygenated, thus obtaining an immobile field for the surgeon's manipulations.

The deep degree of anesthesia necessary to obtain the so-called "slack abdomen" required by British surgeons is responsible for the adherence to chloroform in many cases and also accounts for the absence of technician anesthetists. This also explains the practice of omitting morphin in the preoperative medication and the use of large doses of atropin. The preference for chloroform is declining, however, and the value of carbon dioxide for respiratory stimulation and deetherization is well recognized. Nitrous oxide and oxygen is gaining ground rapidly and much interest was shown in the demonstration of his gas and oxygen apparatus by McKesson.

The method of having but one or two papers with full and free discussion, which obtains at the British meetings, was noteworthy.

The Associated Anesthetists of the United States and Canada carried home many memories of the high professional attainments, as well as the cordial hospitality of their hosts, and are looking forward to the next congress with the British Medical Society, which is to take place in Winnipeg in 1930.

The development of the various methods of local and regional anesthesia offers the hope of solving one of the problems of the specialty of anesthesiology. If a large percentage of the operations which at present require general anesthesia may be properly done with the use of local, the need for the great numbers of anesthetists, which are necessary at present, will be obviated and a higher type of anesthetist will be produced.

MARY E. BOTSFORD.

Communicable Diseases

THE Rôle of Toxins in Certain Infectious Diseases—It is incredible that almost twenty years elapsed between the first reports of Savchenko's [1] toxin and antitoxin for the scarlet fever streptococcus and the more recent work of Dochez [2] and later the Dicks,[3] who were able to confirm the pioneer investigations and put their own discoveries to a practical test. Today, aside from a number of unexplained inconsistencies of a bacteriological and immunological nature, the rationale of scarlet fever toxin and antitoxin is probably established.

The impetus given to similar investigations by such work has put experimenters on the trail of a toxin for the streptococci found in measles. The studies by Hektoen's associates,[4] reported from Chicago during the past year, bid fair to settle an old controversy if the work should be confirmed. The clinical manifestation of the exanthemata should have suggested ere this the probable rôle of toxins in these diseases.

More surprising than the unaccountable mental and experimental lag regarding scarlet fever, measles, and related infections, is the absence of fundamental investigations concerning the part which toxins seem to play in acute rheumatic fever and particularly in subacute bacterial endocarditis. Granted that the bacteriology and immunology in these diseases are not yet on an established basis, due to difficulties in technique and in classification of the strains of organisms, none the less, studies with Berkfeld filtrates of some of the streptococci may yield important and surprising data. There are cogent reasons for suspecting a bacterial toxemia in subacute endocarditis. Not the least of these is the localization of the organisms in certain parts of the body while appearing in relatively small numbers in the circulating blood and producing a toxemia out of all proportion to their number found during life or after death. In this regard the conditions do not differ essentially from those in other infectious diseases caused by toxin-producing bacteria. While a most recent report by Small [5] on the etiology of rheumatic fever lacks certain necessary controls to make the study convincing, it does suggest forcibly the need for further work along the lines of bacterial toxins in this disease.

Finally, one is led back over the old and well-beaten trail of tuberculosis. Here too it is astonishing that the rôle of toxins as the most important aspect of the clinical findings has been utterly disregarded until within recent months. As early as 1903 Denys [6] described laboratory and clinical experiments with a Berkfeld filtrate of bouillon cultures of tubercle bacilli. It is important to recall that this substance had not been altered by him either physically or chemically and could be readily destroyed by heating. Here we have the germ, so to speak, of a toxin! So engrossed was Denys with the therapeutic possibilities of his "B. F." (bouillon filtré) that he failed to devise experiments necessary to establish fundamental principles upon which the identification of a toxin must be based. So, too, Spengler [7] missed an opportunity in his researches on a bouillon filtrate. Recently, however, clinical and laboratory investigations [8] reported from the University of California appear to have thrown new light on the fundamental mechanism of toxin production by the tubercle bacillus and the rôle of such toxins in the diagnosis and possible therapeusis of the disease. These researches, furthermore, have offered decisive evidence that the tuberculin substance is entirely different from and bears no relation to the toxin element.

The old is ever new and the new ever old in the field of medical discovery.

FREDERICK EBERSON.

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